

## SOE-24V/SOE-24H PHOTOELECTRIC SMOKE & SMOKE/HEAT DETECTOR



SOE-24V



SOE-24H

### DESCRIPTION

The SOE-24 Series of detectors are reliable, high-quality, UL 268 7th Edition listed Photoelectric Smoke Detectors allowing them to be used in all open areas where smoke detection is required. The SOE-24V is a photoelectric only detector. The SOE-24H is a combination smoke and UL 521 7th Edition listed heat detector. The new multi-spectrum smoke categorization technology detects smoldering and flaming fires, including polyurethane fuels, while reducing nuisance cooking alarms.

### STANDARD FEATURES

- High signal-to-noise ratio and sensitivity stability are effective in a wide range of environmental conditions
- Wide viewing angle alarm indicators
- Automatic drift compensation and maintenance indication
- Built-in magnetic test feature
- Break-away, hidden locking feature for use with NS bases
- Optimized reduction to false alarms and enhanced reaction time to real fires

### DETECTOR SPACING

Smoke sensor spacing shall be in compliance with NFPA 72. For smooth ceilings and in the absence of specific performance-based design criteria, the distance between smoke sensors shall not exceed a nominal spacing of 30 ft. (9.1m) or all points on the ceiling shall have a sensor within a distance equal to or less than 0.7 times the nominal 30 ft. (9.1m) spacing. Sensors shall be located within a distance of one-half the nominal spacing, measured at right angles from all walls or partitions extending upward to within the top 15 percent of the ceiling height. For additional instructions see NFPA 72

### OPERATION

The SOE-24V Photoelectric Smoke Detector utilizes a green/red LED for indication of status. In a normal standby condition the LED flashes green every 3 seconds. When the detector senses that its sensitivity has drifted outside the UL listed sensitivity window the LED will flash Red every 3 seconds. When the detector senses smoke and goes into alarm the status the LED will latch on Red.

The detector utilizes an IR-LED and Blue LED to distinguish smoke characteristics.

The SOE-24H adds a heat sensing element to also detect 135°F temperature.

### PRODUCT LISTINGS



California State  
Fire Marshal  
7272-0410-0509

Specifications subject to change without notice.

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## SOE-24V/SOE-24H PHOTOELECTRIC SMOKE & SMOKE/HEAT DETECTOR

### SOE-24V Conventional Photoelectric Smoke Detector

<b>Sensing Element</b>	Smoke	IR LED, Blue LED, Photodiode
<b>Supply Voltage</b>	Operating Voltage Range	8-35VDC
	Absolute Max Voltage	42VDC
	Maximum Voltage Ripple	8200mVAC
	Maximum Input Capacitance	0.01uF
<b>Current Consumption</b>	Standby Current	59uA
	Minimum Allowable Alarm Current	5mA
	Maximum Allowable Alarm Current	150mA
<b>Startup</b>	Time	25s (Max)
	Current	160uA (Max)
<b>Reset</b>	Time	100ms (Min)
	Voltage	2.5V (Min)
<b>Compatible Bases</b>	NS4-100, NS6-100, NS4-220, NS6-220, NS4-221, NS6-221, NS4-224, NS6-224	
	HSC-220R, HSC-221R, HSC-224R, HSC-4R, HSC-4R12	
	*W suffix (not listed above) indicates white color	
<b>Operating Temperature Range</b>	32°F ~ 120°F	
<b>UL Listed Ambient Temperature</b>	32°F ~ 120°F	
<b>Storage Temperature Range</b>	-22°F ~ +140°F	
<b>Operating Humidity Limit</b>	<95%RH at 104°F, <85%RH at 140°F	
<b>Dimension</b>	3.94" diameter x 1.69" tall	
<b>Color</b>	Ivory	
<b>Weight</b>	3.53 oz.	
<b>Air Velocity Range</b>	0-4000 fpm	
<b>Sensitivity Range</b>	1.82-3.16%/ft	
<b>Testing</b>	Test with Smoke Sabre aerosol cans or the Testfire 1000/1001 or 2000/2001 with TS3 smoke capsules * Refer to Conventional Detectors Technical Bulletin Rev 07/21	



### SOE-24H Conventional Photoelectric Smoke and Heat Detector

<b>Sensing Element</b>	Heat	Thermistor
	Smoke	IR LED, Blue LED, Photodiode
<b>Supply Voltage</b>	Operating Voltage Range	8-35VDC
	Absolute Max Voltage	42VDC
	Maximum Voltage Ripple	8200mVAC
	Maximum Input Capacitance	0.01uF
<b>Current Consumption</b>	Standby Current	59uA
	Minimum Allowable Alarm Current	5mA
	Maximum Allowable Alarm Current	150mA
<b>Startup</b>	Time	25s (Max)
	Current	160uA (Max)
<b>Reset</b>	Time	100ms (Min)
	Voltage	2.5V (Min)
<b>Heat Sensitivity Range</b>	135°F	
<b>Compatible Bases</b>	NS4-100, NS6-100, NS4-220, NS6-220, NS4-221, NS6-221, NS4-224, NS6-224	
	HSC-220R, HSC-221R, HSC-224R, HSC-4R, HSC-4R12	
	*W suffix (not listed above) indicates white color	
<b>Operating Temperature Range</b>	32°F ~ 117°F	
<b>UL Listed Ambient Temperature</b>	32°F ~ 117°F	
<b>Storage Temperature Range</b>	-22°F ~ +140°F	
<b>Operating Humidity Limit</b>	<95%RH at 104°F, <85%RH at 140°F	
<b>Dimension</b>	3.94" diameter x 2.16" tall	
<b>Color</b>	Ivory	
<b>Weight</b>	3.53 oz.	
<b>Air Velocity Range</b>	0-4000 fpm	
<b>Sensitivity Range</b>	1.80-3.16%/ft	
<b>Testing</b>	Test with Smoke Sabre aerosol cans or the Testfire 1000/1001 or 2000/2001 with TS3 smoke capsules * Refer to Conventional Detectors Technical Bulletin Rev 07/21	

